July 20, 2015

DES
ARCHITECTS
ENGINEERS

Mr. Bob Batha
Chief of Permits
Bay Conservation and Development Commission
455 Golden Gate Avenue, Suite 10600
San Francisco, CA 94102

Project: Westpoint Harbor – **PHASE 2** Boatyard
(BCDC permit No: 2-02)
DES Project No. 9970.001

Subject: Permit Amendment Request

Dear Mr. Batha,

On May 12, 2015 DES Architects + Engineers submitted a package requesting Plan Review for the proposed Phase 2 Boatyard at Westpoint Harbor. Per Ellen Miramontes letter dated June 10, 2015 the plans were not approved on the grounds that three of the items shown in the drawings we not permitted in the BCDC Permit Amendment no. 3.

On behalf of Mark Sanders and Westpoint Harbor we are requesting a permit amendment to correct discrepancies associated with the boatyard fuel dock/service dock, total area of the boat launch ramp, and two new bio-retention areas for storm water management required by the Regional Water Resources Control Board. A description of each item is listed below together with recommended language for your consideration.

Fuel Dock Larger than Authorized

The boatyard service dock 'V', as shown on the attached **Exhibit A**, is 2,600 SF in total area and includes a 500 SF section fitted with fuel management and spill prevention facilities. The 2003 permit plans show the fuel dock as part of the 1000' transient dock (N and P) at the west side of the marina. Amendment 3 moved the fuel dock to the east side of the harbor for safety reasons, and the revised permit plans show the fuel dock as part of the boatyard service dock. (This is for obvious reasons: a 500 SF fuel dock 10' wide would only be 50' long. This is too short to tie up most boats in the harbor, and would not allow boats to queue up for fuel or pumpout).

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The text of the current permit only lists the "500 SF fuel dock and pump-out facility", although the attached legal description and plans include the full service dock. We request a Permit Amendment to comprehend the service dock and make text and drawings consistent as follows:

2. "Construct, maintain and use a 2,600 SF boatyard service dock which includes a 500 SF section for fueling and pumpout facilities".

Size of Public Boat Launch Ramp Differs from Authorization

Amendment No. 3 of the permit authorizes a "2,160 square foot, two-lane, public boat launch ramp". In fact the total launch ramp area is 3,600 SF including abutments.

The two-lane launch ramp is designed in accordance with the California Division of Boating and Waterways *"Layout, Design and Construction Handbook for Small Craft Boat Launching Facilities"*, and is 30' wide and 120' from toe to the hinge point for a total area of 3,600 sf. (See attached **Exhibit B** - Construction Document sheets dated 10/23/06 for details of the existing launch ramp). Plans attached to the original permit and amendment 3 also show 3,600 SF, as do the 2003 DRB Staff Report plans and final dock construction drawings approved in 2007. Finally, the legal instrument filed with San Mateo County and attached to amendment 3 shows 3,600 SF.

Area data was requested by BCDC in April 2003 for "structures within the 103.0 contour" in order to calculate "total fill". This included docks, pilings, a haul-out bay and the launch ramp. This data was provided by the civil engineer (Bohley Consulting) and the "the total launch ramp area within the 103' contour" was reported as 2,160 SF. This is correctly described in the 2003 DRB package, but the last three words did not make it into the actual permit. In order to make the permit language consistent with the plans and filings, we request the following amended language in the permit:

"Construct, use and maintain an approximately 3,600 SF two-lane public launch ramp, 2,160 SF of which is within the 103.0 contour".

Bio-retention Basins not Authorized:

The permit does not specifically authorize bio-retention ponds.

The permit includes conditions for protection of water quality, and requires the permittee to conform to Regional Water Quality Control Board requirements for storm water management. In additional to bioswales included at the time the permit was issued, current RWQCB requirements include two bio-retention basins to treat storm water in the Phase 2 site area. The basin in the north east corner of the site (1) is approximately 4,000 SF and the basin to the east of the site (2) is approximately 3,950 SF. These basins meet current state requirements for the treatment of on-site stormwater. Suggested language to align RWQCB and BCDC authorization:

5. "Construct, use and maintain storm water runoff management systems as required by the RWQCB including two bio-retention basins of approximately 8,000 SF in total".

Note: The proposed Bioretention basins are shown on sheets 4, 5, C1 and C2 of the Plan Review Submittal dated May 12, 2015, copy attached for your reference. The attached **Exhibits C1 and C2** shows an enlarged plan for each basin with the proposed approximateSF.

Effective December 1, 2011, the Municipal Regional Stormwater Permit (MRP) requires stormwater treatment be met by using evapotranspiration, infiltration, rainwater harvesting and reuse or landscape-based biotreatment. Stormwater treatment measures must be sized to comply with one of the hydraulic design criteria listed in the municipal regional stormwater permit's Provision C.3.d. ***Bioswales, as previously proposed, are a velocity based treatment method which is no longer permitted.***

Bioretention basins are designed to capture and treat the stormwater before it flows to the storm drain system. All on-site storm water must be treated. In our case we have split the bioretention into 2 basins which connect directly to existing outlets. The size of the effective treatment area is approximately 4% of the total site area. The sides of the bio-retention basin slope at 3:1 down to the effective treatment area. The basins are filled with a special soil mix to treat water as it percolates; which is then captured in a series of pipes at the bottom of the basin.

Soils in the bioretention basins must have a long-term minimum infiltration rate of 5 inches per hour over the life of the system, in accordance with the soil specifications approved by the Regional Water Board. Biotreatment systems must also have a surface area no smaller than what is required to accommodate a 5 inches per hour stormwater runoff surface loading rate. The proposed bioretention basins are fully planted with a mixture of native grasses and plant material. Attached are some images of similar installations for your reference.

I hope you find these amendment suggestions sufficient. Please feel free to contact me if you need any additional information. I can be reach by email at djedkins@des-ae.com or by phone at (650) 364-6453 ext 465.

Sincerely,

DES Architects + Engineers, Inc.

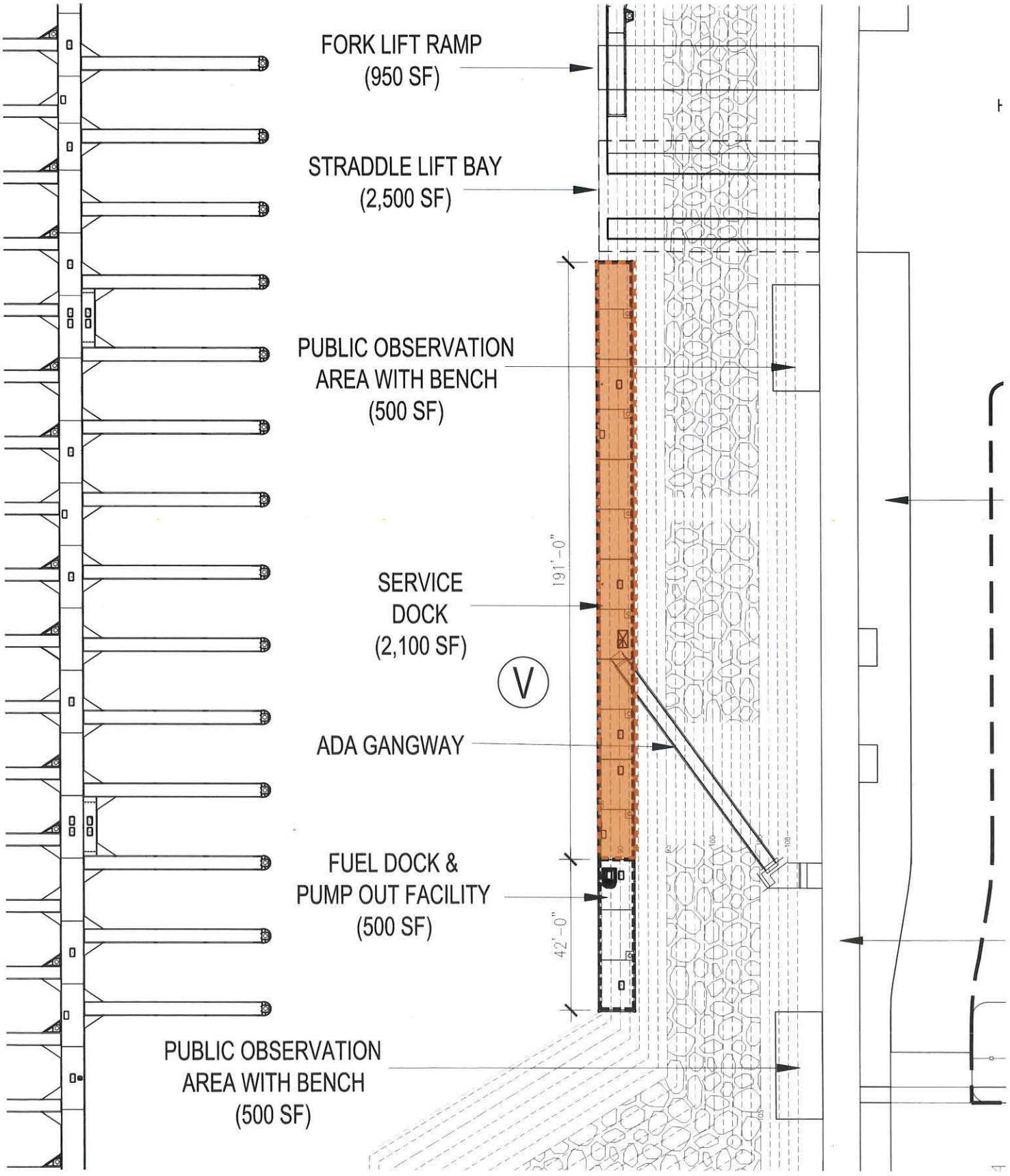
Dawn Jedkins

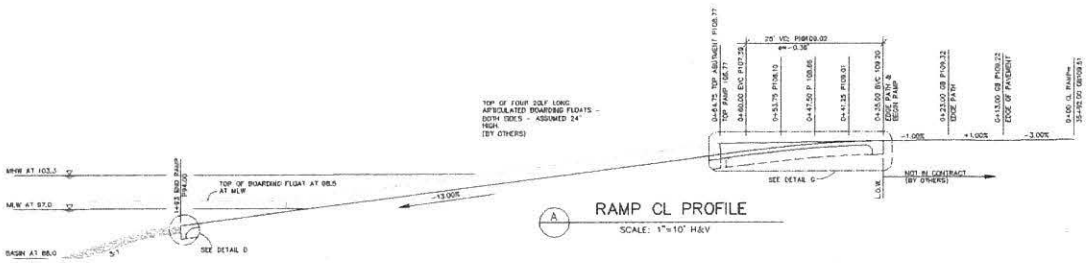
Dawn Jedkins
Senior Associate

cc: Mark Sanders, Westpoint Harbor
Grant Bowen
Ellen Miramontes - BCDC
Adrian Klein – BCDC

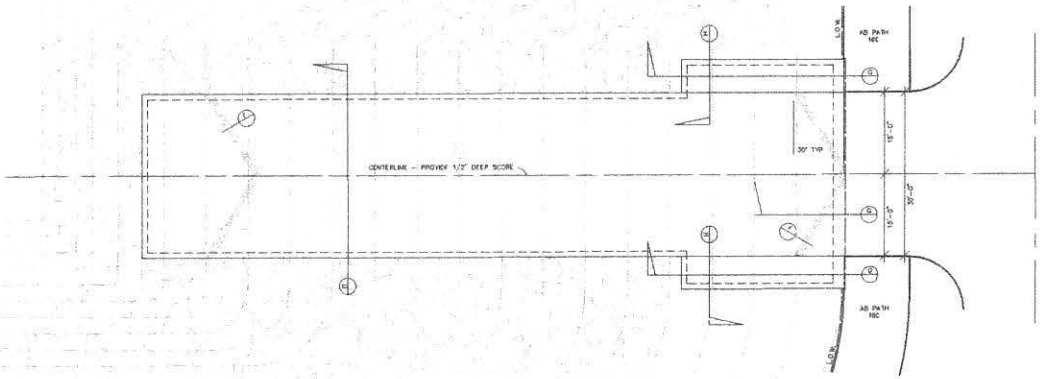
Amendment No. 6 to 2002.002
Rec'vd on 7/20/15
Staff asgnd Adrienne
Logged on 7/27/15
Fee Paid $2,000 - CK No. 014890
Non-Mat ✓

EXHIBIT A
Service Dock 'V'

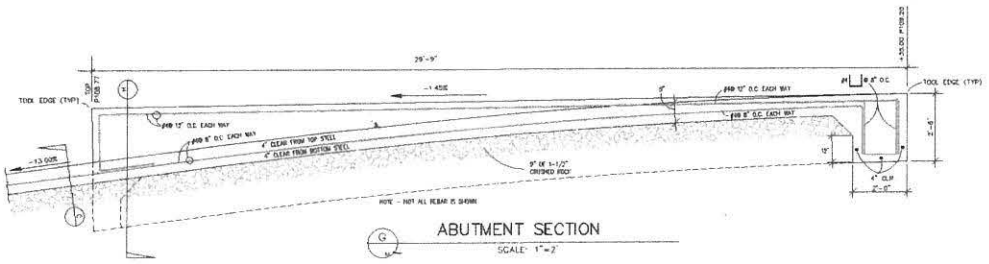




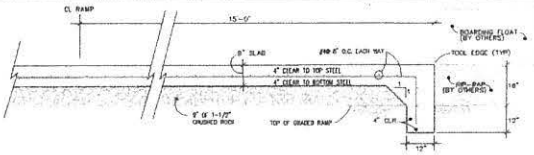
A RAMP CL PROFILE
SCALE: 1"=10' H&V



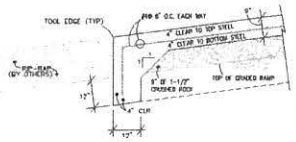
B RAMP PLAN
SCALE: 1"=10'



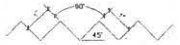
G ABUTMENT SECTION
SCALE: 1"=2'



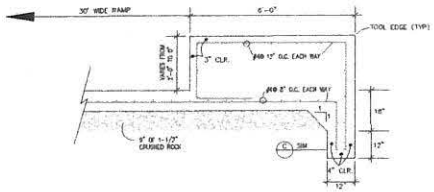
C RAMP PARTIAL SECTION
SCALE: 1"= 2'



D TOE OF RAMP DETAIL
SCALE: 1"=2'



F V-GROOVE DETAIL
NO SCALE



H ABUTMENT CROSS SECTION
SCALE: 1"= 2'

CONSTRUCTION NOTES:

1. CRUSHED ROCK SHALL BE 1-1/2" MAX. SIZE.
2. BAR REINFORCEMENT SHALL BE A706/A706M AND EPOXY COATED PER ASTM D3963. TIE WIRE AND CHAIRS SHALL BE EITHER PLASTIC OR EPOXY COATED.
3. PORTLAND CEMENT CONCRETE.
   a) PORTLAND CEMENT SHALL BE TYPE V.
   b) CONCRETE SHALL BE 6-SACK MIX TO PRODUCE 4,000 PSI COMPRESSIVE STRENGTH AT 28-DAYS, WITH 5% AIR ENTRAINMENT, AND A MAXIMUM OF 3-1/2" SLUMP.
   c) AGGREGATE SHALL BE 3/4" MAXIMUM.
4. V-GROOVE LAUNCH RAMP FINISH:
   a) TYPICAL V-GROOVE DETAIL IS SHOWN AND IS TO BE CONSTRUCTED OVER THE ENTIRE LAUNCH RAMP SURFACE.
   b) CONTRACTOR IS REQUIRED TO EITHER PURCHASE OR MANUFACTURE A V-GROOVE TOOL.
5. V-GROOVE CONSTRUCTION PROCEDURE:
   a) PRIOR TO CONCRETE POURING, CONTRACTOR SHALL PROVIDE A 4'x8'x4" V-GROOVE CONCRETE TEST PANEL FOR APPROVAL BY THE ENGINEER.
   b) START CONCRETE PLACEMENT AT BOTTOM OF RAMP AND WORK UPHILL.
   c) ADEQUATELY VIBRATE THE CONCRETE EVERY 12" ON CENTERS WITH INTERNAL VIBRATORS TO ELIMINATE AIR POCKETS, AND TO INSURE FULL CONTACT WITH THE REBAR AND CONSTRUCTION FORMS. DO NOT OVER-VIBRATE AS THE AGGREGATE WILL SETTLE TO THE BOTTOM AND WEAKEN THE LAUNCHING RAMP SLAB.
   d) TO ASSIST CONTRACTORS AND OTHERS IN THE CONSTRUCTION OF V-GROOVE SURFACED BOAT LAUNCHING RAMPS, THE DEPARTMENT OF BOATING AND WATERWAYS HAS PRODUCED AN EIGHT MINUTE VIDEO WHICH ILLUSTRATES THE INFORMATION PRESENTED ABOVE. THE VIDEO CAN BE ORDERED BY CONTACTING THE CALIFORNIA DEPARTMENT OF BOATING AND WATERWAYS, LOCAL ASSISTANCE PROGRAM, BOATING FACILITIES DIVISION, 1629 S STREET, SACRAMENTO, CA 95814 (916-445-9867).
   e) THE OWNER SHALL PROVIDE A CURRENT COPY OF "LAYOUT, DESIGN, AND CONSTRUCTION HANDBOOK FOR SMALL CRAFT BOAT LAUNCHING FACILITIES" TO THE LAUNCH RAMP CONTRACTOR.

10/23/06

WESTPOINT MARINA & BOATYARD
LAUNCHING RAMP PLAN & DETAILS
REDWOOD CITY, SAN MATEO COUNTY, CALIFORNIA

Sheet No. 2 of 2 Sheets

EXHIBIT B
Launch Ramp Detail

Typical Bioretention Planting

Effective Treatment Area

3:1 Slope

BIORETENTION BASIN - 1
(4,000 SF)

BIKE RACK

PLANTING

EXISTING BAY PATH

HC VAN

HC

10 PARKING STALLS

10'-0"

EXHIBIT C1

Bioretention Basin -1

EXHIBIT C2
Bioretention Basin -2